

REMARKS

This Response is responsive to an Action mailed by the Office on June 17, 2004.

Claims 1-7, 9-23 and 27-46 are pending in the application, with claims 1, 18, 23, 30, 34 and 42 being the independent claims. Claims 1, 2, 4-7, 9-18, 20-23 and 27-33 stand rejected; claims 3, 19 and 25 stand objected to.

In the forgoing Amendments, Applicants have amended claims 1, 6, 9-11, 16, 18-20, 23, 27, 29, 30, 32; canceled claims 8, 24-26 without prejudice to or disclaimer of the subject matter therein; and added new claims 34-46. Support for these amendments can be found in the specification and claims of the application as filed. No new matter has been added by these amendments. Applicants respectfully request entry of the foregoing Amendments and reconsideration of the Application in light of the amendments above and the remarks below.

I. Claim Rejections Under 35 U.S.C. §102(b)

Claims 1, 2, 4-18, 20-24 and 26-33 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kramer (U.S. Patent No. 5,184,319). This rejection is respectively traversed for the reasons below.

Kramer discloses an interface system in which a tendon assembly is affixed to a glove and serves to transmit tendon forces from a (remote) motor to the glove. The tendon assembly is coupled to a digit tip force applicator, which comprises a force-applying platform (see 501 of Fig. 5A) and a force-sensing platform (see 502 of Fig. 5A). The force-sensing platform provides force signals to the motor force control system, which makes appropriate adjustments such that the desired force profile is perceived by the user.

Kramer, however, fails to disclose or suggest “a sensor coupled to the housing, the sensor configured to detect a user manipulation of at least a portion of the housing and output sensor signals associated with the user manipulation of the portion of the housing...” as recited in independent claim 1 or 18. Kramer also fails to disclose or suggest “detecting a user manipulation of a device; sending sensor signals associated with the user manipulation...” as recited in independent claim 30.

More specifically, the “sensor” of Kramer (col. 3, line 55) referenced in the Office Action is not actually a sensor, but rather a “sensing body part,” which is the body part of the

user that senses the force feedback. Unlike the present invention, as recited by claims 1, 18 or 30, where a sensor is configured to detect a user manipulation of at least a portion of the housing, the body part position-sensing means of Kramer senses body part position and/or orientation (see col. 3, lines 43-54 of Kramer) but not a user manipulation of the housing.

For at least these reasons, independent claims 1, 18 and 30 are allowable. Based at least on their dependence on independent claims 1, 18 or 30, dependent claims 2-16, 19-22 and 31-33 are allowable as well. Applicants respectfully request the withdrawal of the rejection of these claims.

In addition, Applicants further note that the amendments made above with respect to claims 6, 9-11, 16, 27, 29 and 32 are to correct typographical and/or grammatical errors; they are not made to overcome the cited references.

II. Allowable Subject Matter

Claims 3, 19 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants thank the Examiner for the indication of the allowable matter.

In the forgoing amendments, independent claim 23 has been amended to explicitly incorporate all of the limitations of claim 25, and therefore is in the condition for allowance. Based at least on their dependence on independent claim 23, dependent claims 27-29 are allowable as well. Applicants respectfully request the withdrawal of the rejection of these claims.

New independent claim 34 is claim 3 rewritten in independent form, and therefore is in the condition for allowance. Based at least on their dependence on independent claim 34, dependent claims 35-41 are allowable as well.

III. New Claims 42-46

Claim 42 recites an apparatus, comprising “a housing; a sensor coupled to the housing, the sensor configured to detect a manipulation of at least a portion of the housing and output sensor signals associated with the manipulation of the portion of the housing; and an actuator assembly disposed within the housing, the actuator assembly including an

actuator, a first flex joint and a second flex joint each being coupled to the actuator, the actuator being configured to output an inertial force to the housing, the first flex joint and the second flex joint being configured to allow a movement of the actuator with respect to the housing.”

As discussed above, in Kramer’s system the actuator (see motor 900 of Fig. 9) is remotely coupled to the glove by way of the tendon assembly. In other words, Kramer fails to disclose or suggest “an actuator assembly disposed within the housing” as recited in claim 42. For at least these reasons, independent claim 42 is allowable. Based at least on their dependence on independent claim 42, dependent claims 43-46 are allowable as well.

CONCLUSION

All of the claims are in condition for allowance. Applicants believe that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

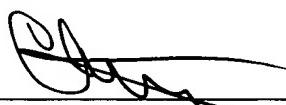
Prompt and favorable consideration of this Amendment is respectfully requested.

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